

REPLACES
ART 34 AMDT

WO 2004/005764

PCT/GB2003/002850

According to a first aspect of the present invention a shift lever mechanism comprises a housing, a lever having a longitudinal axis, pivoting means adapted to facilitate pivoting of the lever into a plurality of positions, and lever position indication means operable to indicate disposal of the lever in one or more predetermined positions, characterised in that the lever position indication means is actuated by the pivoting means.

The lever position indication means may comprise, for each predetermined position of the lever to be indicated, transducer means and actuation means.

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The transducer means may comprise an electrical switch, which may be a potentiometer.

Alternatively, the transducer means may comprise an air valve.

15 The actuation means advantageously comprises a member and a receiver adapted to receive the member therein. The member may be disposed on the transducer means and the receiver may be disposed on the pivoting means.

20 The transducer means may be disposed in the housing preferably along an axis extending radially outwards and, more preferably, substantially perpendicular relative to the longitudinal axis of the housing.

25 Advantageously, at least part of the transducer means, preferably the member, is displaceable relative to at least part of the pivoting means, preferably the receiver. The displacement of the part is preferably along an axis extending radially outwards relative to the pivoting means.

According to a second aspect of the present invention a shift lever mechanism comprises a housing, a lever having a longitudinal axis, pivoting means adapted to facilitate pivoting of the lever into a plurality of positions, and resilient means, operable to provide

resistance to disposal of the lever in one or more predetermined positions, characterised in that the resistance is provided by the pivoting means.

The resilient means may comprise a resilient member and a detent. The detent is

- 5 preferably disposed on the pivoting means and the member preferably disposed on the housing substantially along an axis extending radially outwards from the pivoting means. The member is preferably displaceable relative to the detent.

In relation to any of the abovementioned embodiments of the present invention, the

- 10 pivoting means may comprise a spherical element advantageously disposed in a retaining cup and operable to pivotally move therein by sphere-to-sphere engagement therewith.

The spherical element may be fixed to the lever thereby forming a pivot point on the lever. The spherical element may be fixed to the lever by means of a retaining pin.

- 15 Alternatively, the spherical element may form an integral part of the lever.

The lever may extend through the spherical element to form an arrangement substantially coaxial therewith.

- 20 The spherical element is preferably disposed on the lever intermediate first and second ends thereof.

The spherical element is preferably formed from a plastics material. Alternatively, the spherical element may be formed from a metallic material.

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The retaining cup may be formed from a plastics material. Alternatively, the retaining cup may be formed from a metallic material.

The retaining cup may be disposed in the housing and may be formed from more than

- 30 one part.

CLAIMS

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1. A shift lever mechanism comprising a housing, a lever having a longitudinal axis, pivoting means adapted to facilitate pivoting of the lever into a plurality of positions, and lever position indication means operable to indicate disposal of the lever in one or more predetermined positions, characterised in that the lever position indication means is actuated by the pivoting means.

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2. A shift lever mechanism as claimed in Claim 1, wherein the lever position indication means comprises, for each predetermined position to be indicated, transducer means and actuation means.

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3. A shift lever mechanism as claimed in Claim 2, wherein the transducer means comprises a switch.

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4. A shift lever mechanism as claimed in Claim 3, wherein the switch comprises a potentiometer.

5. A shift lever mechanism as claimed in Claim 2, wherein the transducer means comprises an air valve.

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6. A shift lever mechanism as claimed in Claims 2 to 5, wherein the actuation means comprises a member and a receiver, adapted to receive the member therein.

7. A shift lever mechanism as claimed in Claim 6, wherein the member is disposed on the transducer means and the receiver is disposed on the pivoting means.

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8. A shift lever mechanism as claimed in Claim 2 to 7, wherein the transducer means is disposed in the housing.
9. A shift lever mechanism as claimed in Claims 2 to 8, wherein the transducer means is disposed along an axis extending radially outwards relative to the longitudinal axis of the housing.
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10. A shift lever mechanism as claimed in Claims 2 to 9, wherein the transducer means is disposed substantially perpendicular relative to the longitudinal axis of the housing.
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11. A shift lever mechanism as claimed in Claims 2 to 10, wherein at least part of the transducer means is displaceable relative to at least part of the pivoting means.
12. A shift lever mechanism as claimed in Claims 6 to 12, wherein the member is displaced relative to the receiver.
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13. A shift lever mechanism as claimed in Claims 11 and 12, wherein the displacement is substantially along an axis extending radially outwards relative to the pivoting means.
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14. A shift lever mechanism comprising a housing, a lever having a longitudinal axis, pivoting means adapted facilitate pivoting of the lever into a plurality of positions, and resilient means, operable to provide resistance to displacement of the lever in one or more predetermined positions, characterised in that the resistance is provided by the pivoting means.
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15. A shift lever mechanism as claimed in Claim 14, wherein the resilient means comprises a resilient member and a detent.
16. A shift lever mechanism as claimed in Claim 15, wherein the detent is disposed on the pivoting means.
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17. A shift lever mechanism as claimed in Claims 15 and 16, wherein the resilient member is disposed on the housing.
18. A shift lever mechanism as claimed in Claim 17, wherein the resilient member is disposed substantially along an axis extending radially outwards from the pivoting means. 5
19. A shift lever mechanism as claimed in Claims 15 to 18, wherein the resilient member is displaceable relative to the detent. 10
20. A shift lever mechanism as claimed in any of the preceding claims, wherein the pivoting means comprises a spherical element.
21. A shift lever mechanism as claimed in Claim 20, wherein the spherical element is disposed in a retaining cup and is operable to pivotally move therein. 15
22. A shift lever mechanism as claimed in Claim 21, wherein at least one of the spherical element and cup is formed from a plastics material.
- 20 23. A shift lever mechanism as claimed in Claim 21, wherein at least one of the spherical element and cup is formed from a metallic material.
24. A shift lever mechanism as claimed in Claims 20 to 23, wherein the spherical element is fixed to the lever thereby forming a pivot point on the lever. 25
25. A shift lever mechanism as claimed in Claim 24, wherein the spherical element is fixed to the lever by means of a retaining pin.
26. A shift gear mechanism as claimed in Claims 20 to 23, wherein the spherical element forms an integral part of the lever thereby forming a pivot point on the lever. 30

27. A shift lever mechanism as claimed in Claims 20 to 26, wherein the lever extends through the spherical element to form an arrangement substantially coaxial therewith.

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